1-40. (Cancelled)

41. (Currently Amended) A method for the preparation of ~~the~~ a proton conducting composite membrane material ~~according to claim 26~~ based on the following steps: a) preparation of ~~a~~ layered particles of zirconium phosphate of the general formula $Zr(O_3POH)_2$ or zirconium phosphate sulfoarylene phosphonate in the form of a mixture of small and large dies by exfoliation of the phosphates in aqueous solution by ~~intercelalation~~ intercalation-deintercalation of an ~~alylamine~~ alkylamine, b) preparation of a colloidal dispersion of the layered particles in a suitable organic solvent or mixture of organic solvents, c) transferring of the layered particles from the said colloidal dispersion to a solution of a polymer by mixing, d) forming membrane materials with oriented particles by using the obtained mixture and eliminating the solvent;

wherein said the particles are presented in mixtures of large and small dies and are exfoliated to a thickness from ca. 5 nm to 100 nm.

42. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 41 wherein the polymer is an ionomer.

43. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 41 wherein the polymer is an ionomer of the membrane material is that of a proton conducting ionomer.

44. (Currently Amended) The method for the preparation of the proton conducting composite membrane material according to claim 41 is at least one synthetic ionomer selected from the group consisting of perfluorosulfonic polymers, sulfonated ~~polyvinylidenfluoride~~ polyvinylidenefluoride, sulfonated polyetherketones, sulfonated polybenzimidazoles, sulfonated polyphenylsulfones, sulfonated polysulfones and sulfonated polyethersulfones.

45-46. (Cancelled)

47. (Previously Presented) The method for the preparation of the proton conducting composite membrane materials according to claim 41 wherein the mixture containing the polymer and the layered particles is obtained by mixing the ionomer solution with the colloidal dispersion of the layered particles.

48. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 41 wherein the colloidal dispersion of the layered particles is obtained by using at least one organic solvent selected from the group consisting of N,N'-dimethylformamide, N-methyl-2-pyrrolidone, dimethylsulfoxide, acetonitrile and alkanols, preferably N,N'-dimethylformamide and/or N-methyl-2-pyrrolidone, or their mixtures or water or mixtures of water and organic solvent.

49. (Previously Presented) The method for the preparation

of the proton conducting composite membrane material according to claim 41 wherein a ionomer solution and the colloidal dispersion are prepared in the same solvent or in different solvents, provided that the mixing of the solution with the dispersion does not cause colloid flocculation or ionomer precipitation.

50. (Cancelled)

51. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 41 wherein the mixture containing an ionomer and the layered particles is obtained by "phase transfer".

52. (Cancelled)

53. (Previously Presented) The method for the preparation of the proton conducting composite membrane materials according to claim 41 wherein the solvent is removed from the polymer-colloid mixture by evaporation.

54. (Cancelled)

55. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 41 wherein the solvent is removed from the polymer-colloid mixture by the use of a non-solvent, preferably water.

56-72. (Cancelled)

73. (Currently Amended) A method for the preparation of the proton conducting composite membrane material ~~according to claim 26~~ based on the following steps: a) preparation of ~~a~~ layered zirconium phosphate sulfoarylene phosphonate of the general formula $Zr(O_3POH)_{2-x}(O_3P\text{-}Ar)_x$, wherein ~~$0 \leq x \leq 2$~~ $0 < X \leq 2$, in the form of a mixture of small and large particles by direct exfoliation in aqueous solution by intercalation-deintercalation of an alkylamine, b) preparation of a colloidal dispersion of the layered particles in a suitable organic solvent or mixture of organic solvents, c) transferring of the layered particles from said colloidal dispersion to a solution of a polymer by mixing, d) forming membrane materials with oriented particles by using the obtained mixture and eliminating the solvent;

wherein said particles are presented in mixtures of large and small dies and are exfoliated to a thickness of ca. 5 nm to 100 nm.

74. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 73 wherein the polymer is an ionomer.

75. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 73 wherein the polymer is an ionomer of the membrane material is that of a proton conducting ionomer.

76. (Currently Amended) The method for the preparation of the proton conducting composite membrane material according to claim 73 is at least one synthetic ionomer selected from

the group consisting of perfluorosulfonic polymers, sulfonated ~~polyvinylidenfluoride~~ polyvinylidenefluoride, sulfonated polyetherketones, sulfonated polybenzimidazoles, sulfonated polyphenylsulfones, sulfonated polysulfones and sulfonated polyethersulfones.

77. (Previously Presented) The method for the preparation of the proton conducting composite membrane materials according to claim 73 wherein the mixture containing the polymer and the layered particles is obtained by mixing the ionomer solution with the colloidal dispersion of the layered particles.

78. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 73 wherein the colloidal dispersion of the layered particles is obtained by using at least one organic solvent selected from the group consisting of N,N'-dimethylformamide, N-methyl-2-pyrrolidone, dimethylsulfoxide, acetonitrile and alkanols, preferably N,N'-dimethylformamide and/or N-methyl-2-pyrrolidone, or their mixtures or water or mixtures of water and organic solvent.

79. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 73 wherein a ionomer solution and the colloidal dispersion are prepared in the same solvent or in different solvents, provided that the mixing of the solution with the dispersion does not cause colloid flocculation or ionomer precipitation.

80. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 73 wherein the mixture containing an ionomer and the layered particles is obtained by "phase transfer".

81. (Previously Presented) The method for the preparation of the proton conducting composite membrane materials according to claim 73 wherein the solvent is removed from the polymer-colloid mixture by evaporation.

82. (Previously Presented) The method for the preparation of the proton conducting composite membrane material according to claim 73 wherein the solvent is removed from the polymer-colloid mixture by the use of a non-solvent, preferably water.

83-86. (Cancelled)